

PAN AMERICAN fisherman

ESTABLISHED 1947

December 1955



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Merry Christmas

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Christmas Seals are everybody's gift. They're given by most people—and everyone, all mankind, benefit.

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Buy and use Christmas Seals

PAN AMERICAN FISHERMAN

Because of the importance of the above message, this space has been contributed by

MANUFACTURED FISHERY PRODUCTS

THE production of manufactured fishery products (canned, cured, packaged, and byproducts) in the United States, Alaska, Hawaii, and Puerto Rico in 1953 was valued at about \$587,000,000. Canned products accounted for 52% of the total value; packaged shellfish, 20%; byproducts, 13%; packaged fish, 9%; and cured fish, 6%.

The pack of canned fishery products in the countries mentioned above, in 1953 amounted to 792 million pounds, valued at \$307 million to the packers. This was a decrease of 1% in volume but an increase of less than one-half of 1% in value compared with 1952.

The pack of tuna and tuna-like fishes amounted to 9.6 million cases (189 million pounds), valued at \$126 million. The tuna pack includes the production in Puerto Rico for 1953.

The 1953 pack of canned salmon amounted to 3.9 million standard cases (188 million pounds) valued

at \$82 million to the canners. The salmon pack was the smallest since 1921.

The 1953 pack of Pacific sardines (pilchards) amounted to 63 thousand standard cases (2.8 million pounds) valued at \$653 thousand, only about 1% of the record 1954 pack of 5 million cases. The pack of Maine sardines amounted to 2.8 million cases (56 million pounds) valued at \$17 million to the packers. Compared with the previous year, this was a decrease of 21% in both volume and value.

The pack of anchovies amounted to 1 million standard cases (33 million pounds) valued at \$7.7 million. This was an increase of over 50%, compared to the previous year.

The 1953 production of fishery byproducts was valued at \$74 million, 9% more than the previous year. The production of fish and marine-animal scrap amounted to 239 thousand tons, valued at \$29.6 million to the producers, a small increase over 1952.

The production of marine-animal oils amounted to 20.3 million gallons, valued at \$11.5 million to the producers. This was an increase of about 25% over 1952. Some of the other important byproducts produced during 1953 were marine pearl-shell, oyster-shell, and fresh-water shell products, valued at \$16.6 million, and fish solubles and homogenized-condensed fish valued at \$7 million. *

More Fish Sticks

Fish sticks were reported as being handled in 1955 by over 98% of the major wholesale distributors, according to a survey made by the trade publication *Quick Frozen Foods*. Only 92% of the same distributors reported handling fish sticks in 1954. French-fried potatoes, which were the leading specialty in 1954, dropped to second place in 1955 and were handled by 95% of the distributors.

Breaded shrimp was sold by 91% of these outlets in 1955, a small decline from 94% in 1954. Pre-cooked seafoods rose in popularity. Stocked only by 65% of the distributors in 1954, the survey indicates they were handled by nearly 85% in 1955.



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Cruise Report of the M/V Yellowfin

CRUISE 7 of the *M/V Yellowfin* for 1955, as reported by the State of California Department of Fish and Game: Sailed: September 6, 1955, from Los Angeles Harbor. Returned: September 25, 1955, to Los Angeles Harbor.

Locality: The coast of Baja California from Pt. Eugenia to the California-Mexico border and the area around Cedros Island, Mexico.

Purpose: To assess the relative abundance of sardines, Pacific mackerel, jack mackerel, and anchovies in Northern Baja California waters, and to tag and release yellowtail wherever possible.

Results: 64 light stations were occupied and sets with the blanket net yielded 12 samples of sardines, 15 of Pacific mackerel, 2 of jack mackerel and 8 of Northern anchovies. Of the 12 sardine samples taken, 8 contained fish of less than 125 mm. standard length ($5\frac{3}{4}$ inch total length) and most probably spawned during the 1955 spawning season. These were found between Cedros Island and Cape Colnett which includes the total range over which sardines of all sizes were taken. The smallest sardines collected (25 mm. standard length, 1 inch total length) were taken from the stomachs of Pacific mackerel at San Quintin Bay. Although nowhere very abundant, sardines were most frequently encountered in Sebastian Viscaino Bay and at Cedros Island. Throughout the area the sardine abundance was about the same as in 1954.

Pacific mackerel, the most abundant species in the area surveyed, were sampled from Sebastian Viscaino Bay in the south to Pt. San Miguel in the north. Twelve out of the 15 mackerel samples contained young fish of either the 1954 or 1955 year classes. Northern Anchovies were taken throughout the range of the survey and the two samples of jack mackerel were taken at approximately the northern and southern limits of the cruise.

Yellowtail were encountered at

FIFTH ANNUAL "TUNA CUTTING"

THE TUNA INDUSTRY wielded a giant can opener when the Fifth Annual "Tuna Cutting" was held in the Lafayette Hotel at Long Beach, December 6-8.

The event is a part of a continuous program by the Southern California tuna canners to maintain high quality, and to review progress made in canning technology during the year.

The cutting consists of judging hundreds of cans of tuna of all types and species of the year's pack, selected at random from cannery warehouses.

Teams of qualified judges scored the tuna on the basis of quality, appearance, texture and standardization of pack. "Brand name" identification always is eliminated through the use of code numbers on the various samples judged.

At the conclusion of the judging, all elements of the tuna industry including cannery officials, plant superintendents, foremen, fishermen, boat owners, together with home economists, inspect the samples.

Results of this year's scoring were announced at a luncheon immediately following, together with a speech by Dr. Roger V. Wilson, director of the Customer Research Division of Continental Can Company, who came from New York for the meeting. He stressed the importance of improving the present high standard of canned foods in general, with specific reference to canned tuna.

"The tuna cutting is one event in a three day quality control program," Charles R. Carry, Executive Director of the California Fish Cannery Association, stated. "Meetings also are being held on plant sanitation and a symposium on improvement of raw fish quality, attended by experts in the field of fisheries technology."

"The tuna industry," Carry continued, "is well aware of its obligation to the American homemaker to maintain and improve product quality wherever possible, and these meetings represent another step in a continuous program to discharge that obligation."

The meetings were sponsored by the California Fish Cannery Association and its subsidiary, the Tuna Research Foundation, in cooperation with the National Cannery Association. *

only two stations of this cruise. Thirty-seven hook and line caught fish were marked and released at West San Benito Island, and six troll caught fish were marked and released around the southern part of Cedros Island. A juvenile yellowtail ($3\frac{1}{4}$ inch in length) was dipped from the bait tank during the course of fishing activities. Exact position of its capture is unknown but a check of baiting stations indicated it must have come from the southern area of Cedros Island.

The *Yellowfin* traveled a total 546 miles scouting for fish schools. One hundred ninety-four schools were observed, of which it was estimated that 15 contained sardines, 78 mackerel, 19 anchovies, 3 squid, 58 sardines, and 21 contained unknown species. Scouting and sampling were considerably hampered by strong wind and rough water between I Canoas and San Quintin Bay, but weather conditions were favorable throughout the rest of the area surveyed.

PAN AMERICAN Fisherman

Published Monthly

Established 1947

KELlogg 8-5441
Orange Savings Bldg.
ORANGE, CALIFORNIA

"BUSINESS MAGAZINE OF THE WEST COAST FISHERIES"

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Busco-Nestor Studios

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VOL. 10 - No. 5

• DECEMBER •

1955

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About This Issue . . .

SOME of it may be due to the joys of the Holiday Season, but there's a better feeling in the air about the tuna situation. Everybody in the industry hopes that it is a basic change and that it will become stronger and more permanent. So . . . Merry Christmas and Happy New Year to all!

*

To help make the above wishes come true—that's the purpose of the recommendations contained in the "Two Open Letters" (pages 12 and 13). The originals were addressed to The Honorable Harold C. McClellan, Assistant Secretary for International Affairs, Department of Commerce, Washington, D.C.

Copies went to various other government officials in high places. Careful follow-up by the American Tunaboat Association is expected to lead to some action along the lines suggested when the Congress reconvenes in January.

*

At the top of page 25 is a brief report on the recent meeting in Tokyo of the International North Pacific Fisheries Commission. One of the best features was the election of that business-like fishery expert, Edward W. Allen, to head the U.S. group for the coming year; with the next annual meeting to be held in Seattle, beginning November 12, 1956.

Sando Publications: PAN AMERICAN FISHERMAN • FRUIT & VEGETABLE REVIEW • MOTOR WEST

Pan American Fisherman is published monthly • Business and executive offices—Orange Savings Building, Orange, California, telephone KELlogg 8-5441. Postmaster: Form 3579 requested. Subscription rates in the United States and possessions, one year \$3.00; two years \$5.00; five years \$10.00. Canada \$4.00 per year; all other countries \$5.00 per year. Current copies 50c each; back numbers \$1.00 each when available. In case of change of address, subscribers are requested to notify both the Post Office and us, and allow one month for change to take effect. Entered as second class matter March 12, 1953, at the Post Office at Orange, California, under the Act of March 3, 1879. Printed in U.S.A.

JAPANESE ACTIVITIES

Translated by

W. G. VAN CAMPEN

Pacific Oceanic Fishery Investigations

New Training Ship

The Tokyo University of Fisheries' new training ship *Umitaka Maru* (1,378 tons), has been completed at an Osaka yard, the cost of building being 300 million yen (\$830,000). Professors of the University of Fisheries and of Tokyo University, and more than 70 other representatives of all segments of the fisheries research world, boarded the vessel, and one day was spent in public trials from Osaka Bay to Twaji Island. The latest types of fishing equipment of every kind and of navigational aids mark a new level in Japanese fishery technology.

The vessel is said to be the most modern training ship in the world. There are a trawl bridge and a slipway in the stern, reminiscent of a whaling mothership, and providing for the most modern way of handling trawls and other types of gear. In the wheelhouse the ship's heading, speed, engine revolutions, and so forth are fed into an electronic device which automatically records the course made good on a time scale. In cruising on the open sea the vessel's course can always be held accurately by an automatic steering engine. The ship is also equipped with a gyro compass. The collection of water samples and bottom samples and temperatures, which hitherto was possible only to about 2,000 meters, can now be carried to about 10,000 meters.

The *Umitaka Maru* is 680 meters long, 11.3 meters in beam, and 5.5 meters deep. Her planned draft fully laden is 4.5 meters. She has an Uruga

diesel with 2,000 brake HP at 225 r.p.m. giving a speed of 13 knots. Equipped to fish trawls from the stern, drift nets, or longlines, the ship has a 120 HP trawl winch. Refrigerated holds measure 35.5 m³ and freezing compartments have a capacity of 43.5 m³. There are two laboratories. The refrigeration machinery comprises two 40 HP and one 3 HP all freon. The ship's complement will be 15 officers, 7 professors, 36 crew, and 60 students, a total of 118. All living spaces, even the students' quarters, are air-conditioned.

Overseas Fishery Developments

The Chiba Prefecture fisheries guidance ship *Boso Maru* (405 tons) is to be sent to Venezuela under a contract with the firm Productos Mar to engage in tuna ground survey, trawling, and tuna longlining. Venezuelan entry permits have been granted, and the signing of a final contract is waiting upon granting of travel permits by the Japanese government. The vessel will be based in La Guayra or Cumana, and will operate from July 15 to May 31 of the next year. Productos Mar will take all of the catch at the following price schedule: \$685 per ton for bluefin, \$510 for shark, \$260 for albacore, \$202 for yellowfin, \$156 for striped marlin, and \$444 for broadbill. If good fishing grounds are discovered,

boats from Chiba Prefecture will be admitted to the fishery with priority.

The Nanyo Boeki Company has received permission to operate 8 tuna boats of 50 to 100 tons out of Espiritu Santo in the New Hebrides. The vessels have been selected and the permission of the Japanese government is being awaited. A refrigerator plant with 30 tons ice-making capacity and 600 tons freezing and cold storage will be built at Espiritu Santo, the capital to be supplied by the Export-Import Bank. The employment contracts call for entry permits of workers ashore to be renewed every 3 years and for those of vessel personnel to be renewed each year.

With the increasing number of Japanese tuna boats operating in the Indian Ocean, it appears inefficient for them to carry their fish all the way back to Japan, with an inevitable drop in quality on the way, then to process the fish and send it back to markets in southeast Asia. A plan has therefore been advanced to build a cold storage plant and cannery in Singapore; however, after examining this plan the Fishery Agency of the Japanese government has decided that it is not feasible at the present time. They appear to be of the opinion, however, that an intermediate fueling base should be established there.

Fishery Imports & Exports

Most notable among the trends observed in United States imports of fishery products during the first eight months of 1955 are the increases in imports of frozen tuna and canned crabmeat and the declines in canned salmon, fish meal, and groundfish fillets.

According to data compiled by the Fish and Wildlife Service from reports of the Bureau of the Census, imports of groundfish and ocean perch fillets from Iceland have shown a particularly sharp drop in recent months. In the first eight months of 1955, these imports from Iceland totaled 13,734,000 pounds compared with 30,243,000 pounds in the similar period of the previous year. Imports of these items from Canada showed a gain of 12,168,000 pounds.

Increased quantities of frozen tuna totaling 18,798,000 pounds greater than in the 1954 period, came largely from Japan and Peru. Fish meal imports were substantially below those of the previous year due principally to smaller receipts from Norway, Angola and Peru. Canned salmon imports, largely from Canada, were 83% below those of the period of a year earlier. Canned crabmeat imports, principally from Japan, were considerably above a year ago.

Among the exports, canned sardines and canned salmon showed large gains over the eight months of 1954. Fish oil exports, however, were about 24% less than a year ago.

Season's Greetings

From

HARBOR

BOAT & YACHT COMPANY

AC 3-3133

San Diego 6

California

Report from *Washington*

Items Gleaned from the Nation's Capital

TUNA RECOMMENDATIONS.--Considerable notice is being taken around the Capitol, especially by Western legislators, of the recent recommendations sent here by the American Tunaboat Association of San Diego. All the Senators and Representatives from the Western States realize how much the tuna industry means to the welfare of Southern California . . . the problem is to bring this home to brass hats from the other sections of the country.

Tuna has become much more than a local problem; canned tuna is sold and consumed nationally, and the welfare of the industry has also become a matter affecting the national economy. A full realization of this point is perhaps the first necessity for proper consideration when the Congress reconvenes next month.

Next, in order to get action, insiders here say it is important for all segments of the industry to get together and agree on exactly what they want from the government. The American Tunaboat Association has at least taken a step in this direction with their two different sets of complete recommendations: one set for immediate action and the other for long range planning.

Whether these recommendations are what the whole industry wants, and whether they will strike a responsive chord among the nation's legislators--that's the \$64,000 question. (Editor's note: See pages 12 and 13 of this issue for the complete recommendations).

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IMPORTS INCREASE.--Most notable among the trends observed in the United States imports of fishery products during 1955 are the increases in imports of frozen tuna and canned crabmeat and the declines in canned salmon, fish meal, and groundfish fillets.

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RIP LEASE RULES AGAIN POSTPONED.--The Interstate Commerce Commission

issued an order last month postponing the 30-day truck leasing requirement from December 1, 1955, to March 1, 1956.

Evidently, this action was taken in response to fishery and agricultural interests' opposition to the Commission's action of advancing the effective date of the leasing rules without giving Congress an opportunity to consider pending legislation pertaining to this controversial subject. The active support of S. 898 by all interested parties is important.

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"BOZO MARU" TO FISH FOR TUNA.--A Japanese boat "Bozo Maru" is scheduled to start tuna fishing off the island La Blanquilla this month. The boat will be operated by Japanese for a Venezuelan-Japanese company. Japanese sampled these waters and encountered tuna, evidently in commercial quantities. It is presumed that this fishing will be long line.

--o--

TWO ASSISTANT DIRECTORS FOR FWS.--Appointment of two Assistant Directors for the Fish and Wildlife Service was announced by Acting Secretary of the Interior Fred Aandahl.

Robert H. Johnson, presently Director of the Division of Fish and Game of the State of Massachusetts, has been named Assistant Director for Wildlife, a post long vacant. Lester Bagley, Wyoming State Game and Fish Commissioner, has been appointed Assistant Director for Field Operations. He succeeds Ernest F. Swift who resigned in August.

--o--

PERUVIAN IMPORT DUTY ON SARDINES.--Peru, under the terms of Article XXVII of the General Agreement on Tariff and Trade has renegotiated a number of tariff concessions previously made under the GATT by withdrawing certain items effective October 1, 1955. In compensation for these withdrawals, Peru has made additional concessions among which are reductions of 1.2% in the import duty on sardines.

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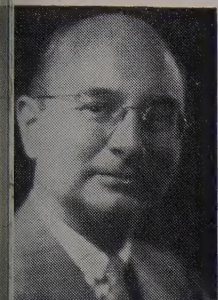
FISH TRAPS IN ALASKA.--Secretary of Interior McKay recently urged passage by Congress of legislation providing for the gradual elimination over a five-year period, of fish traps in the Territory of Alaska.

The Secretary used economic criteria as the basis for his decision in urging the abolishment of salmon traps, rather than the basic criteria of conservation. He stated that, "it is sometimes argued that the traps should be abolished as a conservation measure," but that, "years of experience give no support to this argument." He added that conservation measures can be taken just "as easily through regulating the traps as through regulating other types of gear."

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SALTONSTALL-KENNEDY PROGRAM ENTERS SECOND YEAR.--Allocation has been made of the entire \$3 million available for the second year of the program launched last year by the Fish and Wildlife Service under the terms of the Saltonstall-Kennedy Act.

(Continued on page 2)



The Publisher's Page



*For when the One Great Scorer comes
To write against your name
He'll write not that you won or lost
But how you played the game.*

Yuletide Greetings.—The years go on and our friends and celebrations may change from time to time, but the good wishes are always the same: To all who read this, Very Merry Christmas and the Happiest of New Years! Best of all, this year the above wish seems sure to come true. The country is at peace, business in all lines is booming, people have plenty of money to spend—and the tuna industry is looking up.

The prophecies for 1956 indicate some further improvement . . . unless some totally unexpected event upsets everything. So this Yuletide is a good time for all of us to count our blessings, and to radiate fellowship and good will to our customers, our neighbors, our friends.

The little verse at the start of this page was penned by that great sports writer, Grantland Rice, but it expresses a philosophy of life that is good in more than sports and during more than the Holiday Season. It outlines the "secret" of how to have Happy Holidays all the time.

The Fabulous Fifties.—This decade started out as the fearful fifties . . . with fear of depression, fear of unemployment, fear of war, fear of atomic destruction.

There are still tensions and unsolved problems—both general and in tuna—but we are learning to live with them, to face them, and to solve them. The indications now are that this decade may see enough progress generally to go down in history as the fabulous fifties.

In a recent survey, the 20th Century Fund concluded that our economic progress for the past few years "suggests that the United States has not merely climbed to a new plateau, but is ascending heights whose upper limit is not yet measurable, and at an accelerated rate of speed."

This is pretty hard to believe in view of the recent low fortunes of the tuna industry. But it would be a mistake for us not to realize the opportunities for future growth and well being which surround us.

That's what they are—opportunities. We can capitalize on them if we are willing to face and overcome the problems that always go along with big opportunities.

What Fra Elbertus Said.—Back in our boyhood the great business writer and philosopher was Elbert Hubbard. The other day we ran across a little article written by him in 1914. What he said makes interesting reading at this time, so here it is:

"Business is done on enthusiasm, on hope, animation and good cheer. When you repress men, suppress them, destroy their freedom of initiative, then business languishes. It is just as wrong to kill freedom of business as it is to kill political freedom or mental freedom. Granting

that big business must receive a certain amount of supervision, yet this supervision must be the work of economists, of businessmen, of workingmen, of men who know just how long it takes to earn a dollar with their own hands; for before a man can intelligently supervise he must have worked at the thing he is supervising. To have the business of the world supervised by the demagogue and politician would be like putting a man in to lead the orchestra who had no technical knowledge of music. The domination of business by theorists will eventually destroy the business fabric, kill initiative, stop production, throttle organization, and put a quietus on commercial evolution. And without commercial evolution there will be no civilization."

Ups and Downs of Fisheries.—It is tricky, temperamental and old as the ocean itself—the question of when and where are the fish, especially in commercially profitable quantities.

Last month we ran an interesting article by L. A. Walford, chief biologist with FWS in Washington, covering the riddle "Why do fishery stocks fluctuate?" In previous months we have carried numerous stories on the vagaries of sardines, mackerel, and tuna.

This month one of our feature stories is on the greatest ocean fish tagging and research project ever attempted in Southern Pacific waters. Off the coast of Southern and Baja California marine scientists attempted to find out what is happening to the rapidly dwindling supply of yellowtail, known scientifically as *seriola dorsalis*, once the king of sport fishes in this area.

Headed by Robert D. Collyer, California State marine biologist, crews of marine scientists aided by several purse seine fishing boats and their men, did a spectacular job in tagging a whopping total of over 10,000 fish . . . a number never before approached on one cruise.

Collyer himself won the tagging championship title, conferred upon him by his fellow workers, when he double-tagged 216 yellowtail in one day single-handed. He modestly omits this feature in his story "Tagging Yellowtail" on page 10.

This survey was aimed to determine whether yellowtail are resident fish or travelers, and to uncover facts about their spawning season, nursery ground, rate of growth, food preferences and general habits.

Final Message.—While you are sending Holiday messages, and opening Christmas packages, here's one about a man who was fond of playing practical jokes. He sent a friend a telegram, charges collect, which read: "I am perfectly well."

About a week later the joker received a heavy package with express charges collect. Opening it, he found a block of concrete, and pasted on it this message: "This is the weight your telegram lifted from my mind."

BRIANT SANDO



Removing scales from a tagged yellowtail. By taking scales again at the time of recapture it is hoped that growth rings can be interpreted for aging.

New Record In

TAGGING YELLOWTAIL

To Improve Fishery

By **ROBERT D. COLLYER**

Marine Fisheries Branch,
California Department of Fish and Game

YELLOWTAIL, because of their fighting qualities, are classed as one of California's finest game fishes. Unfortunately, since the center of their abundance is more than 250 miles south of California, they enter the angler's catch only at the northern extremity of their range.

Yellowtail have been reported as far north as Monterey, but such instances are rare. Mostly they range from Southern California south along the Baja California coast and into the Gulf of California. They are most plentiful in the area between Cedros Island and Magdalena Bay and, here, they are of minor commercial importance. Since 1931 the average commercial catch has been about 2750 tons.

Anglers value the sport of fishing for yellowtail highly and have become increasingly concerned over the supply. Without basic knowledge, they have campaigned to make yellowtail exclusively a sportfish. Under the Dingell-Johnson Federal Aid to Fish Restoration Program, the California Department of Fish and Game is trying to determine what can be

done to maintain the best possible fishing.

The first and major problem has been to learn the extent of yellowtail movements from Mexican waters, where they are abundant, to the California fishing grounds where they are not so abundant. Tagging is the most direct approach to this problem and is also valuable in measuring growth rates. Therefore, marking yellowtail has constituted the most important part of the project described here.

Over a three-year period, only slightly more than 5,000 yellowtail were marked on 51 cruises, ranging from 1 to 35 days. In contrast during September, 1955, over 10,000 fish or about 50 tons were tagged during a single three-week trip.

Credit for this fabulous record goes to the owners and crews of two commercial purse seine vessels who worked with untiring enthusiasm to attain success. After other methods of catching yellowtail proved unsatisfactory, the San Pedro seiner *Stella Maris* owned by Ben and George Fukuzaki was chartered by the De-

partment of Fish and Game. In addition, in an unusual spirit of cooperation, Bill and Jack Horner, owners of the San Pedro seiner *American Venture* volunteered their services on the fishing grounds. In this operation 22 commercial fishermen worked wholeheartedly to complete a job designed to improve a fishery which is primarily for anglers.

Yellowtail were found in abundance off the north side of San Benito



The purse seine boat (100 ton capacity) used in these tagging operations.

ands and in Sebastian Viscaïno y, east of Cedros Island. The net, which measures 380 fathoms long by 10 fathoms deep, was set 13 times.

Three successful hauls were made at San Benito Islands on beautiful, calm days. Bad weather then forced movement of the operations to the lee of Cedros Island. Here also yellowtail were around in considerable numbers, and the men were able to haul along approximately 20 miles of oreline, protected from strong winds by the high mountains of the land. Successful hauls at Cedros Islands numbered three, two during daylight and one at night.

The fish, held in the bag of the net between the *Stella Maris* and the large net skiff, were brailed and tagged as fast as four tagging crews could handle them. Actual tagging time was about 35 seconds per fish. On the best day, the men from the two vessels worked 20 hours making

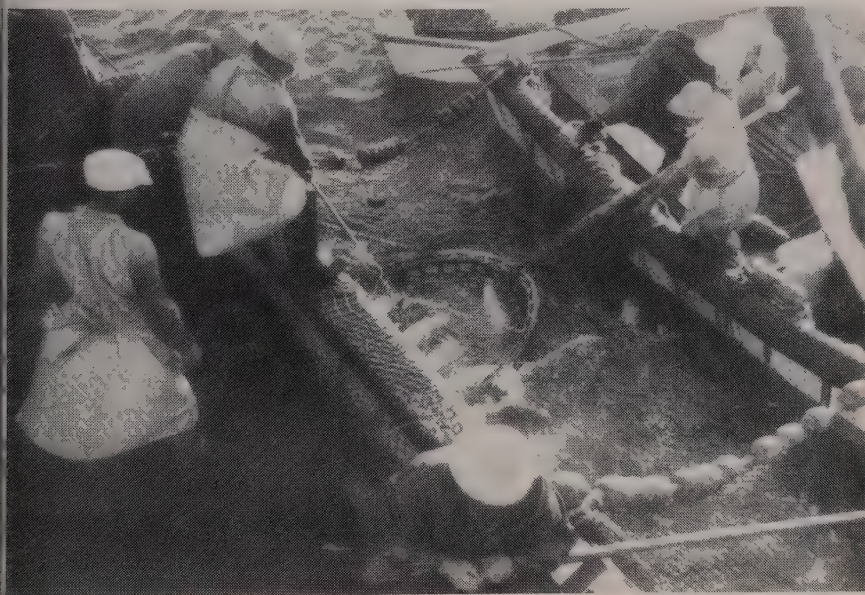
the single night haul and marking 5,730 yellowtail.

Fish were being tagged, measured and released by this crew at the rate of about 400 per hour. Yellowtail are difficult to handle, which makes tagging a constant battle between man and fish. They are, however, extremely hardy and many should be retaken in months to come.

Vinylite tubing tags, inserted through the muscle tissue under the second dorsal fin and knotted in place over the back, were used on all yellowtail. Marked fish are quite conspicuous and fishermen catching them are urged to turn in the whole fish to the nearest Department of Fish and Game office, for by so doing far more will be learned about the yellowtail.

Cooperating fishermen will receive a letter of gratitude and a plastic card carrying a history of their fish.

★



Brailing yellowtail for mass tagging aboard the *Stella Maris*

Charts Covering Lake Mead

The second edition of charts covering Lake Mead, Arizona-Nevada, has just been published by the U. S. Department of Commerce.

Chart 5457-A and B covers the Boulder and Virgin Basins; chart 5458-A and B covers Overton Arm, Northern and Southern Parts; and chart 5459-A and B covers an area extending from Temple Bar Area and Greberg Canyon to Lower Granite Forge.

Numerous rocks, reefs and names of geographic features have been in-

cluded on the new editions. Hydrographic surveys throughout most of the water area reveal average depths of 100 to 300 feet.

Lake Mead, an important feature in the migration flyways of wild waterfowl, is one of the largest artificial lakes in the world. Along its extensive shoreline new recreational areas are springing up in convenient locations to meet an annual influx of more than half a million visitors and fishermen.

Charts are distributed by the sales agents, district offices and the Washington office of the Coast and Geodetic Survey. Price 25c per copy.

Heaven, Hell and Salt Water

Above is the title of a new book by two young Californians who sailed their 39-foot schooner *Lang Syne* around the world. An adventure story—all true—as wholesome as the open sea, as thrilling as science fiction, as interesting as visits to the world's most colorful and unusual ports can be.

A few years ago Bill Crowe decided to sell his refrigerator business in Hollywood, built the schooner *Lang Syne* in Hawaii with his own hands and, after 55,000 miles of Pacific cruising, Bill and his wife Phyllis, set off for the Pacific Islands, the Great Barrier Reef, the East Indies, South Africa, Brazil, Bermuda and eventually New York, down to Florida and the West Indies, through the Panama Canal, a stop at California and back to Honolulu.

In storm, shipwreck and uncharted waters, they had fun doing it. The Cruising Club of America awarded them its coveted Blue Water Medal for the years 1948, 1949 and 1950 for their cruising skill. Today the Crowes operate the Ala Wai Boat Works in Honolulu, where they live aboard the *Lang Syne*. The book is published by John de Graff, Inc., 64 W. 23rd St., New York 10, N. Y., and sells for \$3.75.

Fish in Pet Food

The use of fish and fish cuttings in the manufacture of pet food has developed into an increasingly important segment of the fishery industry. The growth of the pet food industry is illustrated by comparing the phenomenal increase in the number of standard cases of animal food packed in 1947 to that of 1954.

In 1947, only 940,000 standard cases (48 pounds each) of pet foods (with fish as the basic protein ingredient) were packed; while, in 1954, over 4 million standard cases were packed. The value has increased from 4 million to 19 million dollars.

Along the Gulf Coast, a new fishery has been developed which is primarily devoted to catching whole fish for processing into cat food. On the Pacific Coast, certain species of rockfishes and fish cuttings are used for canned pet food. Sales of canned pet food that utilize fish as the basic component have become so impressive that several large packing companies are now endeavoring to secure a steady supply of raw material.



TWO OPEN LETTERS

Sent to the U.S. Government · Covering Today's Tuna Problems

BY JOSEPH E. PENACHO, PRESIDENT, AMERICAN TUNABOAT ASSOCIATION

LETTER No. 1

**Covering Long Range
Recommendations**

WE BELIEVE that many of our difficulties in the tuna industry, as well as depressed conditions in other sea fisheries of the United States, arise from a common cause. Accordingly, our first group of recommendations is designed to apply to the whole domestic fishing industry and the processing and distribution industries dependent thereon.

These have been preliminarily discussed with some representatives of the New England industry, the shrimp industry of the southern states, the sardine and mackerel fisheries of this area, and the salmon, halibut and related fisheries of the Pacific Northwest. Accordingly, the recommendations set forth here are flexible enough to draw support from all the above.

I.—Policy

The first necessary step is to state a policy for the commercial fisheries of the United States. Preferably, this should be done in a joint resolution of Congress . . . that the commercial fisheries are a necessary adjunct to the food producing economy and to the defense potential of the United States and that maintenance of their well being promotes the general economic welfare of the nation.

These resources shall not be permitted to suffer serious injury from imports, this to be done in such a way as to have the least adverse effect upon foreign trade.

II.—Implementation of the Policy

Domestic governmental functions concerning the commercial fisheries should be concentrated in one executive department of the government—Agriculture, Commerce, or Interior. We believe the one selected should be the Department of Commerce.

Functions concerning commercial fisheries should be elevated to a point where the official responsible for them should be on a policy making level directly reporting to the Secretary. This responsible official should be an Assistant Secretary.

III.—Functions of the Assistant Secretary

All functions with respect to the commercial fisheries now vested in the Fish and Wildlife Service of the Department of the Interior, should be transferred to this new office with necessary strengthening and reorganization.

This recommendation intends no criticism adverse to FWS personnel now handling these functions; many competent, highly trained public servants are now so engaged.

Our recommendation is made because of the low level of the Service in the government table of organization and its resulting inability to be heard in the policy making councils of the executive departments. We refer particularly to the Branch of Commercial Fisheries, Branch of Fishery Biology, and the Office of Foreign Activities.

To the existing functions, which can be transferred, others should be added to provide for the fishermen of the country in general many of the same services the government now provides for other food producers. Some of those transferred should be expanded in scope. Among those

(Continued on page 18)

OUR previous letter we set forth general recommendations with respect to the whole fishing industry of the country. We believe that if these are carried out a large part, if not all, of the difficulties of the tuna industry will disappear in time. But men in the tuna industry do not have the time to wait. Our market and earning power is shrinking too rapidly to permit waiting for a long time to take effect.

Accordingly, in this letter we set forth recommendations with specific respect to the tuna industry which, if carried out, will safeguard this industry from further serious injury and keep it alive during the period required for the general recommendations previously submitted to take effect.

The essential problem of the tuna industry is this: A Japanese long-line boat can catch tuna in the Indian Ocean, haul it back to Japan, have it frozen there, have it shipped by freighter to California, and have it delivered to a cannery floor here at a price which yields it a handsome profit while the same price brings a net loss to the California tuna clipper who has caught his fish in the stern tropical Pacific, frozen it, and delivered an identical product to the identical cannery floor in California.

The reason for this is the difference in standard of living between the two countries. All major costs (labor, fuel, food, bait, insurance, etc.) are determined by the general economy in which the boat operates and not by the owner-operator. The California clipper is substantially more efficient than the Japanese long-liner in terms of tons produced per boat ton at sea, or per day's labor at sea. But it is not sufficiently more efficient to equalize the difference in cost per ton of production brought about by the difference in standard of living between California and Japan.

The same argument applies to the bacore and purse seine tuna boats in California, Oregon, Washington, and Alaska, and to the Hawaiian tuna vessels. It has prevented the development of American flag tuna fisheries in the East Coast and in the Gulf of Mexico.

This cause of serious injury can be removed in one of two ways:

1. Lowering the cost per ton of tuna production in America at a greater rate than the Japanese tuna producer can do by further increas-

LETTER No. 2

Recommendations for Immediate Action

ing the efficiency differential of the American producer. We think this can very possibly be done in the long run by the combinations outlined in our letter of general recommendations on the nation's fisheries plus practical steps this industry is taking, and is planning to take, on its own initiative.

We know, however, that this cannot be done except in terms of years and we must now think in terms of months because the illness of this industry has been permitted to reach such an acute and critical stage, or

2. Employing governmental remedies to absorb the differential in cost of production or to shield the industry from the effects of such differential.

In view of the time element noted above, we believe it to be absolutely necessary that the government take some such action. We are prepared to recommend the exact action which should be taken by the government, but we know that the Executive is not yet prepared to make a choice between the alternatives available to it, which we list below, with suitable comment as to their probable effect on our industry.

Preparatory to full consideration of these alternatives, we recommend two preliminary actions for the government to take:

1. That the United States Government request the Japanese Government voluntarily to restrict its volume of tuna exports to the United States during calendar 1956, to the same level as a whole, and to the same levels as to specific commodities, as it exported to this country in calendar year 1954.

This action will not, in itself, provide more than minor relief; but it will protect us from more serious injury during the first half of calendar 1956, during which time we expect that the Congress and Executive will be working out suitable remedies for the permanent relief of this industry.

We have adequate grounds to believe that the production of tuna in Japan for this market in calendar 1956 will substantially exceed that during 1955. A considerable fleet of new long range tuna long-liners was launched in Japan the past year; also, broad scale geographic expansion of the Japanese tuna fishery is now proceeding.

2. That the United States Tariff Commission begin at once a cost of production study under Section 336 on yellowfin and skipjack tuna fresh or frozen, whole or beheaded, or gilled and gutted, or divided into portions in order to provide the data required for establishment of such duties, quotas or subsidies as may be adopted under one of the permanent remedies noted below. We are preparing an application to the Tariff Commission for such study.

With these preliminary actions underway, we then request that the Department of Commerce give prompt consideration to a permanent means of relieving the tuna industry from further serious injury due to imports during the period of years which it will take to even out the differential in cost of production between Japanese and American tuna producers by further increases in the relative efficiency of the latter.

Among these means, which require prompt consideration, are:

1. The establishment of bounties or subsidies to American tuna producers adequate to counterbalance the differential in cost per unit of production induced by general economic causes beyond the control of fishermen. These bounties or subsidies can be flexible and subject to adjustment from time to time as the long-range remedies commented on above begin to be effective.

2. The establishment of adequate tariff rates, or the establishment of absolute quotas on the importation of tuna, or the establishment of flexible tariff-quotas adequate to restrain within reasonable bounds the import trade in tuna.

We realize that there is some distaste for extending the subsidy program of the government, also to new tariffs or quota systems. However, one of these methods, or a combination or variation upon them, has to be used or the U.S. tuna fishery will be gone before long-range treatment of its problems, however beneficial, can be effected. *

EBB 'n FLOW

"Electronic Watchdog" for Engines

An "automatic electric watchdog" that sets up a loud warning to the operators of marine craft whenever their engines start misbehaving, has been developed by Raytheon Manufacturing Company, Waltham, Mass.

The device, called "Moto-Larm," is relatively simple to install, and consists of a small panel containing two red lights and a warning buzzer, all of which are simply and easily connected to the vessel's engine. The panel may be mounted in the cockpit, on the bridge, or on any part of the vessel. The lights flash and the signal sounds whenever the engine temperature exceeds a safe limit, or the oil pressure drops below a safe minimum.

Underwater Metal Locator

Mysteries at the bottom of the sea can now be turned into profitable realities thanks to the easy-to-use, single-unit Blutworth Marine Underwater Metal Locator which has a meter pointer that deflects in the presence of ferrous or non-magnetic metals.

Skin divers, both professional and amateur, salvage operators and searchers for sunken motors and other treasures will find the metal locator simple to handle due to the fact that it is almost buoyant, weighing only a pound and a half when submerged. Easy to read, the metal locator provides direct readings with a detecting meter on the housing readily visible for rapid, accurate location.

The Underwater Metal Locator with its meter that "tells the story" is of enormous aid in all salvage operations, and in the location of cables, pipe lines, sunken vessels, outboard motors and any sunken treasures. Write Blutworth Marine, 92 Gold St., New York 38, N. Y.

Season's Greetings

from

Kettenburg Boat Works

AC 3-8161

2810 Carlton St. San Diego 6, Calif.

Does Anchor Load Increase in Cold Weather?

The answer is "yes," according to the new edition of "Anchors and Anchoring," distributed free by Danforth Anchors, Allston Way, Berkeley, California.

A 40-knot wind, for instance, has 12% more pressure at 30 degrees than at 90 degrees, which affects anchoring and sailing as well! "Anchors and Anchoring" is full of similar interesting and useful information on anchoring, including the 1956 line of Danforth anchors.

Monel Fuel and Water Tanks

The Seafarer line of Solid Monel Fuel and Water Tanks are made of corrosion-resistant metal that cannot chip, crack, flake, or disintegrate. This means clean fuel in the case of gasoline tanks, and crystal-clear, rust-free water when used for water storage.

These tanks are manufactured in a wide variety of sizes, and in either rectangular or cylindrical shape. For further information, complete catalog and prices, write Allcraft Manufacturing Company, Inc., Cambridge, Massachusetts.

Hydraulic Starter for Diesels

A new hydraulic starting system for Diesel engines, which assures split-second starting even under adverse weather conditions, has been developed by General Motors. The unit has been tested in the field for some time and is now available for installation on new GM Detroit Diesel engines at the factory or on others already in operation.

The new system, called the General Motors Hydrostarter, eliminates many replacement and maintenance costs common to conventional starters. Its efficiency is not affected by temperature, humidity or altitude. In zero temperatures for instance, the unit attains cranking speed almost instantly.

A brochure describing the Hydrostarter and its operation in detail is available by writing the Detroit Diesel Engine Division, General Motors Corporation, Detroit 28, Michigan.

New Diesel Engine

Kahlenberg Bros. Co., of Two Rivers, Wisconsin, pioneer internal combustion engine builders, has developed a new line of engines designated as "Model E"—claimed to be first in the United States to achieve self-sustained turbocharged operation in a two stroke cycle diesel.

Neat and compact in design, this new Kahlenberg diesel is intended for general service in a variety of fields, embracing both marine and stationary operation. For marine work it is ideal for use as a direct drive, direct reversible unit, and reduction gears can be adapted for extremely low propeller RPM, as well as multiple engine gear drives.

Marine Generating Set

The Model M125-BR is a new 100% marine 5 k.w. generating set designed to fulfill the specific requirements for service afloat. The close-coupled generator is powered by a four-cylinder, four-cycle engine of extremely small overall size, resulting in a complete, compact power plant. Its modern design is further reflected in its light weight and smooth operation.

The new Universal generating set has a capacity of 5500-6000 watts with 12-volt remote starting. It is fully marine engineered for safe, quiet installation below deck. It comes completely equipped, including marine type carburetor and approved flame arrestor, marine water pump, high water-temperature safety shutdown, water-cooled manifold electric fuel pump, radio shielding.

For details write the manufacturer, Universal Motor Company, 53 Universal Drive, Oshkosh, Wis.

Boat Bottom Finish

"Coperoyd Bronze" boat bottom finish, introduced about one year ago, has proven very successful. While it was intended primarily for inland fresh water territory many dealers along the coast have developed a substantial trade for it.

Most any marine supply store or boat dealer will be glad to obtain Coperoyd products for you; or address Metallic Coatings Corp., 22 West 44th St., New York 36, N. Y.

TIDES OF THE INDUSTRY

Bendix Radio Navigator

A new low cost radio direction finder is called the Bendix Radio Navigator. It is compact in size, low price and efficient in operation. One of its outstanding features is quick and accurate tuning by push buttons on all bands . . . said to be the only direction finder with this feature.

Reception is provided on 3 bands, broadcast, marine and beacon. It may be powered by either 6 or 12 volts. Made by Bendix Pacific Division, 600 Sherman Way, North Hollywood, California.

Belden West Coast Sales Meeting

The western sales force of Belden Manufacturing Company, Chicago, held its annual sales meeting in San Francisco. Harold Hofman, West Coast Sales Manager, said the meeting was for the purpose of giving the salesmen additional product knowledge, improving their technique in

holding salesmeetings and studying ways to further increase business. Among those in attendance were Jim Reed and Bob Greenwood of Southern California, Jim Manfrin of Northern California, and Sam Abernathy, who covers the Northwest.

Remote Control TV System

For the first time, closed-circuit TV installations for marine use can be remote controlled, to provide operator safety in hazardous locations, assure undetected operation in security and surveillance work, and permit quick and accurate viewing of widely spaced objectives.

Lenses on the camera are changed, focusing is set, and the camera is directed up or down, right or left, all by remote control by turning a knob. A detailed brochure available free from Dage Television Division, Thompson Products, Inc., Michigan City, Ind.

N.F.I. Convention

The 1956 convention of the National Fisheries Institute, Inc., will be held at the 4-Most Group of hotels in Miami Beach, Florida, April 12-18, inclusive. The 4-Most Hotels include the Seville, Sea Isle, Sans Souci and Saxony. N.F.I. will use the Seville as headquarters, including exhibits.

Diesel Control

Marmac Products, manufacturers of marine engine controls and steering gears, has announced a new heavy-duty control, capable of handling all types of Diesel engines and are supplied in both right and left hand models.

Any type Diesel engine can be readily handled as the direction of cable travel can be reversed on this new control head. A convenient feature is the fact that on the throttle lever side there is a large outside tension adjustment for holding the governor lever in position when set.



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The San Diego Waterfront

JANUARY 1956 may be an important date in the annals of the California tuna fishing industry because it will see two bills sponsored in the next session of Congress aimed at curtailing present excessive imports of tuna to this country.

Senator Thomas Kuechel, Republican of California, told a meeting of Allied Tuna Industries, in San Diego, that Congress would be asked to approve legislation establishing quotas on tuna imports and creating a federal department of commercial fisheries, "on the basis of economic needs of the coastal areas of the United States."

Kuechel told the group—San Diego businessmen whose investments depend heavily upon the tuna industry—the proposed legislation would likely receive bi-partisan support. He expects aid from Federal legislators representing eastern and southern states where the future of commercial fishing is at stake as it is in California.

* * *

An appeal for "a united citizenry" (of individuals and organizations) in the current fight for the tuna industry's survival was made by Councilman Clair W. Burgener, vice-mayor of San Diego. He pointed to a "surprising indifference" up to now.

John Borchers, general manager of the San Diego Chamber of Commerce, said the Chamber considers a prosperous tuna industry indispensable to this area's economy and he pledged continued assistance.

Harold F. Cary, general manager of the American Tunaboat Association, outlined the problems now facing the industry and the recommendations made to solve them.

David H. Carsten, president of the Allied Tuna Industries and chair-

By ROBERT K. LAWSON

man of the meeting, said the trend in the tuna fishing industry has been "progressively and inexorably downward for the past several years" and the government role in arriving at a solution assumes greater importance as our own efforts fail to halt the rising deluge of imports."

* * *

Representative Bob Wilson, Republican of San Diego, indicated early this month that he is at work on legislation to limit Japan's imports; he intends to introduce a bill in the House soon after Congress reconvenes January 3.

Senator Warren Magnuson, Democrat, Washington, indicated that he plans to sponsor similar legislation in the Senate. Magnuson is chairman of the Senate Committee on Interstate and Foreign Commerce; he also headed an investigating committee which met recently at San Pedro to discuss tuna problems.

Wilson expects to attend a conference December 14, in Washington, at a meeting of the nationwide committee on Industry, Agriculture and Labor for import-export policy. Heading the group is O. R. Strackbein. Others who have indicated they will attend the conference are Harold F. Cary, general manager of the American Tunaboat Association, San Diego; Mason Case, general manager of the San Pedro Fishermen's Cooperative Association; and Charles R. Carry, executive director of the California Fish Canners Association, Terminal Island.

* * *

A group of San Diego boat owners, headed by George Soares, owner of the tuna clipper *Dominator*, have taken steps to protect their invest-

ment in the tuna fishing industry by packing and marketing their own tuna. Outstanding characteristic of the pack will be the label "American-Caught-Fish." The first pack is expected to consist of 5,000 cases of solid, chunk and grated grades.

Soares was quoted as saying, "If the project works out and we can merchandise our fish without complications, this may become a large scale cooperative endeavor to move fish off the boats and meet the threat of foreign competition."

Soares hopes later, he said, to enlist additional vessel owners, but for the present the pack will consist of catches made by the *Dominator*, new \$500,000 vessel launched last year in San Diego.

* * *

"I'll be home for Christmas," is a virtual certainty this year for even vessel owner, skipper, engineer, and fisherman in the entire Southern California tuna fishing industry.

More than 100 of the fleet's finest clippers are now tied up in San Diego Harbor loaded with tuna. Many have been in port 60 to 90 days without prospects of selling their fish and returning to the fishing grounds.

Negotiations between canners and union workers closed operations of the canners for some weeks. Resumption of canning has not caught up with the big supplies on hand, and may not do so for several months. Profits dwindle fast on the fish loads, with high overheads continuing in labor and maintenance and dockside operating costs, to maintain the frozen fish in the vessel holds.

* * *

Lawrence Holzman, Executive Secretary-Manager of the San Diego Wholesale Credit Men's Association, summed up the effects of tuna on the

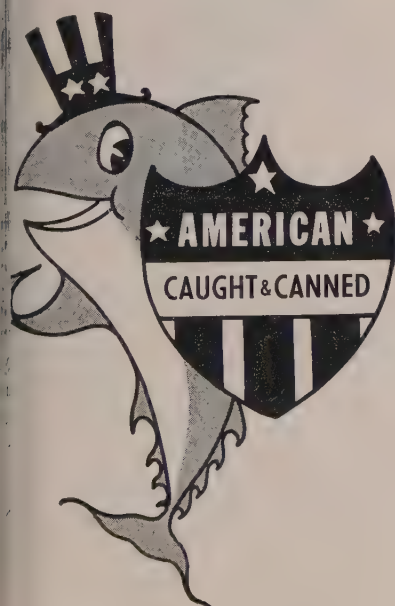
ic community economy of San go:

The delinquency of the secured unsecured account receivable on t accounts are at an all-time high. pliers of fishing vessels and boat ds are much concerned with the ical credit situation. Many boats e been placed on a C.O.D. basis; l, in several instances, due to the reased past-due liabilities, the in- ance companies have refused to are these vessels.

Banks and mortgage holders e been very lenient and have given ensions on principal and interest ments; however, these extensions many instances have target dates l, unless some relief is in sight, eclosures will take place which l cause tremendous losses to the eured creditors as well as the t owners. A vessel under a fore- sure sale today would be fortunate realize the amount of the mort- ge.

"The situation is very critical, and rudent credit manager would not end credit unless guarantors were ilable or the boat owners have sional assets that could be used as lateral."

It is obvious that no avenue of ef from excessive Japanese im- rts, or from the critical credit situ- on, can be seen except through gov- ernment aid and legislation. It is of rious significance that the "battle survival" has lasted nearly five ars now, with the government con- uing to "football" the big issue at ke, *excessively high Japanese im- rts.* *



Fishery Catch by Years

THE catch of fishery products in the United States and Alaska during 1953 totaled nearly 4.5 billion pounds valued at over 352 million dollars to the fishermen according to figures recently released by the Fish and Wildlife Service.

The 1953 production represented a poundage increase of nearly 50 million pounds or 1%, but a value drop of almost 8 million dollars or 2%, compared with the previous year. There was a considerable variation in the catch of the major items during the year, compared with 1952.

Menhaden production soared to nearly 1.7 billion pounds for a new record and an increase of over 312 million pounds compared with the previous year. Shrimp receipts (260 million pounds) also set a new record during 1953, and rose 33 million pounds above the 1952 production. Salmon production slumped during the year, with the poundage of this item dropping from 352 million pounds in 1952 to 313 million pounds in 1953.

Tuna landings (306 million pounds) also decreased, totaling nearly 19 million pounds less being landed than during the previous year. The catch of Pacific sardines continued to drop and sank to an all-time low of 9 million pounds, compared with 329 million pounds in 1951 and 14 million pounds in 1952.

For the second year, shrimp was the most valuable species taken (77 million dollars), followed by tuna (47 million dollars), and salmon (38 million dollars).

Three types of gear accounted for 78% of the 1953 catch. Purse seines took ver 2 billion pounds; otter trawls more than 1 billion pounds; and lines over 443 million pounds.

Year	Pounds	Value to the fishermen	Average price per pound
1940.....	4,059,524,000	\$98,957,000	2.44c
1941.....	4,900,000,000	129,000,000	2.63
1942.....	3,876,524,000	170,338,000	4.39
1943.....	4,202,000,000	204,000,000	4.85
1944.....	4,500,000,000	213,000,000	4.73
1945.....	4,575,500,000	269,900,000	5.90
1946.....	4,456,000,000	310,000,000	6.96
1947.....	4,344,000,000	307,600,000	7.08
1948.....	4,575,000,000	367,000,000	8.02
1949.....	4,796,000,000	339,000,000	7.06
1950.....	4,884,909,000	343,876,000	7.04
1951.....	4,414,045,000	360,996,000	8.18
1952.....	4,418,442,000	360,135,000	8.15

Oil Tow Barge

A coastwise oil-carrying tow barge, believed to be the largest in the world, was launched at Alameda, California, by Pacific Coast Engineering Company for Tide Water Associated Oil Company. It was christened *Amorco*.

The vessel, of all welded steel construction, is 290 feet long—just ten feet shorter than a football field.

The barge is 50 feet wide, 290 feet long, has a draft of 18 feet 7 inches and a flush deck. Its 14 separate cargo tanks are able to carry 48,100 barrels of oil . . . 2,020,000 gallons.

Season's Greetings

IVA L. BARKER

CUSTOM HOUSE BROKER

328 West F St.

San Diego

* * *

SEASON'S GREETINGS

to our friends
of the
Tuna Fleet

THE CARLSON COMPANY

Two Open Letters--Letter No. 1

(Continued from page 12)

which require special attention:

A. Economic Research and Reporting: to keep government and industry informed currently as to production and flow to market of all domestic and foreign produced fishery commodities. Analysis of trends and measures to control production and minimize wide fluctuations.

B. Loan-Credit Facilities: producers of fish should have available sources of credit similar to those provided by the Farm Credit Administration and the Banks for Cooperatives. These sources should provide loan guarantees for new construction and major reconstruction of fishing vessels. Loans of a direct nature to fishermen's associations and cooperatives similar to those now available to farmer cooperatives through the Farm Credit Administration, also commodity loans and emergency loans.

C. Marketing Facilities: sea fisheries fluctuate in abundance through conditions beyond the control of man. The peaks and troughs of these variations can be smoothed out by predictions of availability and marketing conditions through research, and by promotion of products in abnormal supply through means which the Department of Agriculture has developed for farm commodities with similar natural fluctuations in abundance.

D. Protection from Serious Injury from Imports: A number of countries (Japan, Canada, Iceland, and Norway, for instance) consistently are able to land competitive products in the United States at prices lower than these same products can be landed by domestic producers. Those products include tuna, salmon, halibut, fillets of various sorts, sardine, mackerel, crab, and fish meals

and oils (both industrial and medicinal). These are also the major fisheries of the United States. In each instance the basic cause is the difference in standard of living between the United States and the particular country.

The Secretary of the Department, when serious injury is threatened the domestic industry, should be empowered to take appropriate steps to correct the situation.

E. Scientific Facilities: Extensive and well-balanced facilities for research in the field of biology, oceanography, meteorology and limnology are required. This is needed for two separate purposes: conservation, and cheaper harvesting.

1. *Conservation.* Each stock of fish has a natural point of maximum sustainable productivity. All fisheries in the end will require state or Federal conservation regulations as they become mature.

2. *Cheaper Harvesting.* Most resources of the sea are under-harvested or not harvested at all because the fishermen cannot put the commodity on the consumer's plate at a price he is willing to pay. Proper research can effect major reductions in cost of production, so that a fisherman can save days at sea by knowing where to find commercially abundant concentrations of fish. Research should be expanded so that the science of harvesting the sea is as well developed as the science of harvesting the land.

The Japanese Government has made broad strides in this sort of work, and this is one of the reasons why Japanese catch more than one-fourth of the fish caught in the world. The Northern European countries, especially Norway, have also done so.

F. Foreign Activities Facilities. The Federal Government's responsibilities in the international field are now scattered and have grown since the war more rapidly than they have been assimilated. In nearly every branch they are understaffed, and there is little or no correlation between the parts.

Among the most important functions are the following: 1. Foreign reporting of world market conditions. 2. Representation on International Fisheries Commissions. 3. Rep-

resentation at International Fisheries Conferences. 4. Technical assistance programs with other free nations. 5. Trade Agreements Negotiations Facilities. 6. Managerial Facilities.

In summation, these are the requirements of our domestic commercial fisheries:

1. A basic national policy for commercial fisheries, which declares that the maintenance of their economic well-being promotes the general economic welfare.

2. A service in the Executive Branch of government adequately staffed and technically competent in its several responsibilities to implement this policy, and,

3. The leadership of this service placed on a high policy level in government where its abilities can be fruitfully employed by reason of its voice having full and proper weight in the councils of government.

So long as the total fishery economy of this nation has no stature in government, and so long as every executive department passes judgment in some measure on problems of the fisheries, it is our belief that the tuna industry cannot reach a prosperous condition. We believe that many of our problems will disappear or materially decrease in importance when the fishery economy is given proper recognition. We believe the steps we have outlined are necessary and totally in the public interest.

Salmon Plantings

Seven million salmon eggs have been excised from a large run of fall chinook brood fish returning to Soos Creek, a small tributary of the Green River near Auburn, the Washington State Department of Fisheries reported recently.

Green River hatcherymen under Supt. Steve Fallert have handled 6,000 fish from three separate year classes and estimate that the 3,000 fish remaining will yield an additional 3,000,000 eggs.

The station is the main chinook propagating center on Puget Sound. The eggs will begin hatching in December and the resulting fry will begin a four-month outdoor feeding period in the station's newly renovated rearing ponds about mid-winter. Most of them will be planted in Soos Creek and the Green River. Others will be transplanted to selected Puget Sound rivers.

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POFI Activities

The first long-term recovery of a skipjack tagged in Hawaiian waters was made at the end of October. The fish had been tagged in August and was recovered within a few miles of the tagging point. This was somewhat surprising for it has been generally assumed that the skipjack in Hawaii move about a good deal. The tagging wound produced when the California type-G tag was attached had healed very satisfactorily and the fish otherwise appeared to be in good condition. However it had not grown significantly since the tag was placed on it.

Albacore surveys to the north of Hawaii again revealed a concentration of fish between 40° and 50°N. and between 145° and 165°W. Albacore were taken on troll lines and in gill nets, but longline fishing was not productive, resulting in only one albacore. It appears that at this time of year the area is inhabited by smaller albacore ranging up to 25 pounds in weight and that the larger fish that form the bulk of the winter longline catches are not present. It is interesting to note that several skipjack were taken in the southeastern portion of the area in waters as cold at 58°F. Generally this tropical tuna does not occur in water as cold as this.

Surveys in the yellowfin grounds in the vicinity of the Line Islands continued. It appeared that during October the center of yellowfin abundance was somewhat north of the usual location for the highest catches were made near Palmyra Island though significant catches were also made to the south. Late in October, large numbers of small yellowfin weighing from 30 to 50 pounds were encountered in the vicinity of Washington Island and a number of them were tagged.

New Longline System Tested

During a cruise to the Line Islands a new system of handling longline gear was tested and showed considerable promise. The conventional method requires that the gear be disassembled as it is brought in and reassembled when it is set.

On the *Commonwealth* the mainline was coiled down continuously in a large tub, the branch lines being

removed as they came on board. It does not appear that the new system will greatly increase the speed of the operation for this is largely fixed by vessel speed and maneuverability, and the speed of the winches used to haul the gear.

However, it appears that it will reduce the number of fishermen required, possibly enabling four or five men to fish as many as a hundred baskets of gear. If the gear continues to show promise, it should make longline fishing more feasible for American fishermen.

Significant progress was reported by University of Hawaii contractors in developing electrofishing for tuna. Recent experiments showed that they could control the movement of 8- to 10-pound yellowfin in a large well-grounded tank. The tank used was 35 feet long, 4 feet deep and 11 feet wide. Using 16-foot electrode spacing, it was possible to force the tuna to swim to the positive electrode when direct current interrupted at the rate of 20 cycles per second was applied. Source of power was in 6-volt storage batteries that energized a bank of condensers.

Line Islands Fishing Cruise

The *John R. Manning*, Honolulu-based fisheries research vessel of the U.S. Fish and Wildlife Service, returned from a five-week tuna fishing cruise to the Line Islands, about 1,000 miles south of Hawaii. According to Dr. A. L. Tester, Director of the Pacific Oceanic Fishery Investigations, the cruise was part of a year-round program of observations designed to reveal the seasonal fluctuations in the abundance of yellowfin tuna in the most promising of the tuna fishing grounds discovered by Service scientists in the equatorial central Pacific.

This cruise indicated that the center of yellowfin abundance in the region appeared to have shifted slightly to the northward, with the best longline catches being made in the vicinity of Palmyra Island instead of Christmas Island, where the best fishing has usually been found on previous cruises. Surface schools of smaller yellowfin, weighing 30 to

50 pounds, accompanied by flocks of birds were very abundant around Washington Island, but the schools were wild and tended to disperse when the vessel approached, which made it difficult to fish them effectively by trolling.

A considerable number of small yellowfin were taken on the trolling lines, however, and most of them were successfully tagged and released alive. The tagging done on this cruise of the *Manning* brings to a total of more than 900 the number of yellowfin tuna marked and released. POFI scientists in the Line Islands region. It is anticipated that recaptures of these tagged fish, either by Hawaii-based vessels in the central Pacific, by Japanese fishermen in the equatorial western Pacific, or by California tuna fleet in the eastern Pacific, may reveal important information on the migrations and growth of this commercially valuable species.

Frequent observations of surface and subsurface water temperatures were made during the cruise, and data so obtained will be analyzed for evidence of shifts in currents and water masses that may be related to changes in the abundance of tuna in the equatorial fishing grounds.

Vessel Insurance Survey

Contracts for a "Study of Fishing Craft Hull and Protection and Indemnity Insurance" has been let to Princeton University by the U.S. Fish and Wildlife Service.

The work to be performed will consist of a study of experienced insurance firms and fishing craft owners with respect to hull and protection and indemnity risks. A survey of the problem areas, plans, assignments of personnel for initial interviews have been completed.

Some measures of relationships between factors such as type of fishing activity, length of time at sea, age of vessel with the incident of loss of vessel are presently being examined on basis of available insurance company records.

The United States Custom Bureau listing of fishing vessels is presently being reconciled with the Service listing to be used as a population sample from which to draw samples of vessel owners. It is anticipated that migratory habits of certain vessels will cause some complications in attempts to contact vessel captains and for this reason methods of selection and substitutions of vessels are being developed for this study.

The legislation, designed to promote increased production and marketing of domestic fishery products, provides that an amount equal to 30% of duties collected under the customs laws on fishery products shall be transferred annually for three years from the Department of Agriculture to the Department of the Interior. Expenditures for any one year may not exceed \$3,000,000.

In fiscal year 1956, \$2,729,700 will be expended for the continuation of projects initiated last year and which require more than one year to complete.

Among activities to be initiated in fiscal year 1956, the Fisheries Advisory Committee and FWS selected the following:

Tuna Bait Substitute Studies--\$35,000. The tuna clipper fleet is required to spend a substantial portion of its time in search of bait. The development of an artificial bait should cut the costs of operation of the fleet and make it possible to operate more economically.

Alaska Salmon Research--\$108,000. This amount will be divided among four separate research projects on Alaska salmon problems.

Improvement in Quality of Skipjack Tuna--\$10,000. These small size tuna are difficult to preserve aboard the fishing vessel and large losses from spoilage are sustained. The California Fish and Game Commission is studying the problem under a contract awarded by the Fish and Wildlife Service in the first year of the program. Several possible solutions to the problem appear promising. A second year's contract will insure completion of this study.

About \$1,400,000 has been allocated to various biological studies and a like amount will be expended this fiscal year for technological research and educational and marketing activities.

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PAN'S TRADE POLICY.--Japan expects to export goods worth nearly \$500 million to the United States during the current Japanese fiscal year (April through March), compared with \$270 million in the last fiscal year, according to Japan's Ministry of International Trade and Industry. The latter is reported as saying that exports to the United States in the first half of the fiscal year (April through September) totaled \$239 million, an increase of 86% over the corresponding period of 1954.

Along with tuna commodities whose sales to the American market particularly increased were cotton textiles, finished cotton goods, raw silk, woolen goods, sundries, plywood and pottery. The Ministry indicated that "orderly exports" were required to allay the apprehensions of American businessmen who were asking for application of higher tariffs or a quota system to imports of Japanese goods.

The Ministry said the Japanese were taking steps to reassure the American business about alleged Japanese "dumping."

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JUNA BOATS FOR FORMOSA.--On behalf of the China Fishery Co., a shipbuilder in Formosa is negotiating an agreement with a shipyard in Japan under

which the Japanese firm will supply US\$680,000 worth of materials required to build four 350-ton tuna fishing vessels.

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TAX FREE U.S.-PHILIPPINE IMPORTS.--Canned fish from the United States are among the commodities on which the Philippines will not impose an import tax when the revised trade agreement between the United States and the Philippine Republic goes into effect January 1, 1956.

Products not now subject to the 17% tax on foreign exchange will be the same products exempted from the new import tax which is provided for in the revised trade agreement. The Philippine legislature is reported to have completed action creating the new import tax, which is to be reduced progressively each year. Under terms of the legislation, canned fish are among the items on which the import tax will not be imposed in 1956.

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EXTENSIVE JAPANESE SURVEY.--Latest project of the Japanese Fishery Agency is a fishery survey of the Argentine coast. The research ship Toko Maru (1,098 tons), which recently returned from patrol duty in the North Pacific and Bering Sea, sailed from Tokyo last month with plans to circumnavigate the globe, taking about 9 months for the cruise.

After leaving Tokyo, the vessel will put in at Singapore and Colombo, cross the Indian Ocean, investigate fishing grounds south of Madagascar, put in at Capetown, and then cross the Atlantic to Buenos Aires, where it will arrive in January.

After conferring with Argentine authorities, the party will proceed to Ushuaia in Tierra del Fuego, which port will be the base for bottomfish investigations. On the way back up the coast other types of fishing will also be tried.

The Toko Maru will return to Buenos Aires around May 15 and sail for home on May 20. Depending on next year's budget, calls may be made at Rio de Janeiro and in Venezuela, and if time permits, fishing grounds off other South and Central American countries may be investigated.

The following types of fishing will be tried: bottom fishing with trawls, shrimp nets, and crab tangle nets; surface and midwater fishing with lift nets, pole and line, and tuna long lines.

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EXPORT TRADE IN SHRIMPS.--The Queensland, Australia, Fish Board is investigating the possibility of exporting giant shrimps found by the million off the Queensland coast. The board recently sent sample shipments of snap-frozen shrimps to America and to Great Britain, and a U.S. West Coast importer has expressed willingness to take 1,000,000-lb. weight annually on a five-year contract.

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AUSTRALIAN SAMOAN EXPORTS.--The increasing importance of the tuna and the fish meal industries of Eastern Samoa is indicated by figures recently released at Pago Pago. During fiscal year 1953-54, a total of 8,176 cases of canned tuna and 456 sacks of fish meal were exported as compared with 66,160 cases and 3,319 sacks for 1954-1955. The export value for the tuna and fish meal was about \$1 million in 1954-1955.

Research Project Fish Utilization

rancidity in fresh fish — what causes it and what to do about it — is the subject of a new research project in the University of California research laboratories.

Fresh fish, even when refrigerated, has a short storage period before it develops a rancid off-flavor, according to Aloys L. Tappel, assistant professor of food technology on the campus, who is the group leader on the new project.

The first problem will be to find out more about the chemical changes that take place in the oil in the meat that result in rancidity. When these reactions are worked out, the researchers hope to develop some chemical treatment that will slow down rancidity, as has been done with beef and pork.

Tappel, who is cooperating with the U.S. Fish and Wildlife Service in a nation-wide fish utilization study, said the group will work mainly on fish of commercial importance in California — tuna, salmon, halibut, and sardines.

Although most of the tuna is canned, it must be frozen soon after

catching before it gets to the cannery. Much of California's salmon and halibut catch is fresh frozen for the consumer market. Sardines are primarily used for fish meal.

International Advisory Committee

The newly-formed International Advisory Committee on Marine Sciences set up by the United Nations Educational, Scientific and Cultural Organization (UNESCO) met in Tokyo for the first time in October.

The meeting followed a four-day symposium sponsored by the Japanese National Commission and attended by representatives of marine science institutes in the Indo-Pacific region. It represents a new effort to pool scientific knowledge on an international scale to develop methods of investigating the resources of the sea.

Even explorations of the world's oceans have yet to be completed. There is, for example, an immense expanse of the Indian Ocean lying mainly between the equator and 40° S, which is still virtually unknown territory.

It is also believed that more effective international cooperation can ad-

vance practical applications of the marine sciences, such as certain French experiments in harnessing for industrial use the difference in temperature of sea water at great depths and on the surface.

The advisory committee established by UNESCO has received numerous proposals ranging from cartography to measurement of temperature and salinity and from submarine geology to the study of cosmic dust. Among urgent problems are the reaction of research stations in areas such as Latin America and the Indian Ocean, where facilities are not adequate at present, and the rendering of assistance to established institutions. Scientists have already suggested that specialists and technicians be trained through fellowships and exchange programs and that information on the problems of the marine sciences be distributed as widely as possible by a central agency. It has also been proposed that UNESCO assist in supplying equipment, research apparatus, measuring instruments, and even in outfitting an international research ship.



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FOREIGN REPORTS

Ceylon.—Tuna (which are reported to abound in the Indian Ocean) are expected to comprise one of the principal catches of the 94-ton fishing vessel "Mee-gama Maru." The vessel was sent from Tokyo to Ceylon to begin fishing operations in the Indian Ocean for a new Ceylonese-Japanese joint fishing corporation.

When the fishing venture gets going, the Ceylon public is promised tuna in one-pound plastic packages. The vessel will explore areas beyond the coastal areas worked by local fishing vessels.

Cuba.—For more than two years, the official Agricultural and Industrial Development Bank has been making plans for the construction in Havana of a modern fishing terminal with freezing, packaging and storage facilities.

Original plans for expansion of the Tallapiedra Pier have not proven feasible and lands on the north side of Habana Harbor will be used.

Egypt.—An established firm in Alexandria proposes to form a new firm with the help of American capital for the purpose of building a freezing plant to freeze shrimp, spiny lobster and possibly sole fillets. The frozen products will be exported to the United States.

Although the amount of American capital to be invested was not disclosed, it is understood that the dollar investment will be close to 30% of the Egyptian firm's capital. The use of foreign capital enables the new firm to benefit by a seven-year tax exemption. It is planned to purchase shrimp de-veining and peeling machinery from the United States.

Germany.—Prefabrication, standardization, and welding in the construction of fishing vessels makes it possible for West German shipyards to build fishing vessels cheaper than British shipyards. In recent months at least three major British fishery firms have ordered new vessels from German shipyards.

In one German shipyard, trawlers are almost 100% welded and it is only the largest ships which have any mechanical riveting. But the system of prefabrication was of prime interest . . . a wheelhouse, a main deck, etc. Almost every part of a trawler is prefabricated and then simply assembled on the stocks by cranes. This utilizes labor more efficiently and results in savings in manhours.

Iceland.—German trawler skippers discovered a new fishing ground between Iceland and Greenland, and about 160 miles off the Icelandic coast. They were landing phenomenal catches of ocean perch at Grimsby during October.

That part of the sea is usually icebound at this time of the year, but there seems to be no limit to

its prospects during times the ice keeps off.

The skippers and owners of the German trawlers will not divulge the exact position of the new ground, though certain Grimsby skippers are aware of its existence and an experimental voyage to the district will probably be made in the near future.

Japan.—The Japanese Chiba Prefecture fisheries guidance ship "Boso Maru" (405 tons) is going to Venezuela under contract to engage in a tuna survey. The vessel will be based in La Guayra or Cumana, and will operate to May 31 of next year. Productos Mar will take all of the catch.

A Japanese company also has received permission to operate eight tuna boats of 50 to 100 tons out of Esperitu Santo in the New Hebrides. A refrigeration plant (30-ton ice-making and 600-ton freezing and cold storage capacity) will be built at Espiritu Santo.

Libya.—Production of tuna by the fishermen of Libya during the season that ended July 1955 was only 590 metric tons, the smallest in 25 years. Prior to 1952 production averaged close to 1,000 metric tons per year but reached a total of 1,650 tons in 1953, and dropped to 740 tons in 1954.

Export figures for tuna are not available for 1955, but it is likely that Italy will continue to be the primary country of destination as in the past, according to a dispatch from Tripoli.

Peru.—Peru, under the terms of the General Agreement on Tariff and Trade has renegotiated a number of tariff concessions previously made under the GATT by withdrawing certain items effective October 1, 1955. In compensation for these withdrawals, Peru has made additional concessions among which are reductions of 1.2% in the import duty on sardines.

Salvador.—The annual production of shrimp in El Salvador is estimated to be close to 250,000 pounds. The most productive areas are located along the eastern two thirds of the coast and in the Gulf of Fonseca, and the best fishing is from November to June.

Samoa.—The increasing importance of the tuna and the fish meal industries of Eastern Samoa is indicated by figures recently released at Pago Pago.

During fiscal year 1953-54, a total of 8,176 cases of canned tuna and 456 sacks of fish meal were exported as compared with 66,160 cases and 3,319 sacks for 1954-55. The export value for the tuna and fish meal was about \$1 million in 1954-55.

It was stated that 32 Japanese fishing vessels are supplying the tuna cannery and 309 Samoans are employed ashore.

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

The second annual meeting of the International North Pacific Fisheries Commission was held in Tokyo, October 31-November 5 as scheduled. Donald P. Loker, Star-Kist vice president, was among those in attendance representing tuna. Reports indicate that the Commission made these decisions:

To continue the research program begun last year on identifying the origin of salmon caught in the North Pacific, placing more emphasis on ocean tagging and sampling.

To continue studying ocean currents, water temperatures and other oceanographic phenomena that influence the movement of fish.

To exchange full information on such matters in such form that it could be easily understandable.

Appointed a committee to work out standard methods of procedure and

classification of information.

Elected Edward W. Allen, head of the United States delegation, as 1956 chairman.

Selected Seattle, Wash., as the site of the next annual meeting beginning November 12, 1956.

New FAO Fisheries Program

The Eighth Session of the Conference of the Food and Agriculture Organization (FAO) of the United Nations terminated last month in Rome, Italy, after three weeks of meetings on world problems in agriculture, forestry, fisheries, and nutrition. More than 70 member countries celebrated the 10th anniversary of FAO's founding in Quebec, Canada.

Fishery problems were initially discussed in a Technical Committee on Fisheries. A. W. Anderson, Chief of the Fish and Wildlife Service's Branch of Commercial Fisheries, and Charles E. Jackson, General Manager of the National Fisheries Institute, Washington, D. C., served as U.S. representatives on the Committee.

The Committee was in general agreement with the conduct of past programs by the Fisheries Division

of FAO and also concurred with the program proposed for 1956 and 1957 although it was necessary to indicate some items which could be delayed if the full budget allotment was not received. FAO had proposed about a 17% increase over its current budget but the final increases approved were about 10% for 1956 and 13% for 1957.

The Technical Committee on Fisheries gave the highest priority to work in the technological fields of production, processing, gear development, and fishing boat design. It endorsed holding of an international Gear Congress early in 1957 and a repetition of the successful Fishing Boat Congress, probably early in 1958. It was first held in 1953.

Economics and Statistics studies, including such subjects as governmental services to the fishing industry, fishery cooperatives, marketing, etc., were looked forward to with great interest.

Fishery biology activities were deemed most significant in the establishment of a common terminology and a standardization of research methods. In general, the Committee suggested that Regional activities be strengthened.

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